

1K0227AS

Appendix I  
510(k) Summary

# AXON

S Y S T E M S

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OCT 09 2002

This Special 510(k) summary of safety and effectiveness is being submitted in accordance with the requirements of CFR 807.92.

**Name:** Howard Bailin  
Vice President, C.O.O.

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Hauppauge, NY 11788

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**Proprietary Name:** Epoch XP Neurological Workstation  
Epoch XP Lite Neurological Workstation

**Common Name:** Electroencephalograph (EEG Monitor), Evoked Potential (SEP, BAEP, AEP, VEP, MEP) System, EMG Monitor

**Classification Name:** Electroencephalograph, Evoked Response, Electromyograph

**Classification:**

|           |   |
|-----------|---|
| Class II  | (Performance Standards)                 |
| Panels:   | Neurology, Anesthesiology               |
| Number:   | 882.1400 Electroencephalograph          |
|           | 882.1420 Electroencephalograph (EEG)    |
|           | Signal Spectrum Analyzer                |
|           | Electromyograph Monitor                 |
|           | Stimulator, Electrical, Evoked Response |
|           | Stimulator, Photic, Evoked Response     |
|           | Stimulator, Sonic, Evoked Response      |
| Procodes: | GWQ, GWS, GWF, GWE, GWJ, CAB            |

**Predicate Devices** Epoch 2000 K971819

**Description:** The Epoch XP Neurological Workstation provides continuous monitoring of brain and neurologic electrical activity for applications intraoperatively or in the intensive care unit. The system has been designed to meet the demanding requirements for comprehensive neurological monitoring in the electrically hostile operating room and critical care environments.

The Epoch XP can be used to monitor neurological data using either individual or multimodality EEG, EMG and evoked potential test protocols. The main Epoch XP system



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components include: CPU, interface enclosure, data acquisition module, electrical stimulator extension boxes, LED goggles and insert earphones.

Recording electrodes, placed on the patient, are connected the digital preamplifier (data acquisition module) The signal is amplified, filtered, optically isolated and converted to a digital signal. The digitized data is then routed to the digital signal processing (DSP) board located in the interface enclosure. The DSP processes the data and controls timing for the stimulators. The CPU acts as the user interface for setting parameters and controls and for display of the processed data.

Data from external devices, such as vital signs monitors, can be imported to the Epoch XP display screen, allowing the operator to correlate changes in neurologic function with the patient's systemic vital signs. In addition, a display window may be opened to observe the surgeon's microscope view on screen. The Epoch XP is network compatible for data review within the hospital and permits secure information access over the Internet. The Epoch XP is intended for use in the operating room and critical care areas for neurological monitoring and assessment. The instrument uses EEG, evoked potentials and EMG techniques to provide health care professionals with information to help assess a patient's neurological status during surgery or long term monitoring in the ICU.

**Indications for Use:**

Based on the information provided in this 510(k) and the safety and effectiveness criteria of the design and development process, validated and verified, we claim the Epoch XP (Epoch XP Lite) Neurological Workstation to be safe, effective and substantially equivalent to the predicate device noted.

The Epoch XP is similar in concept and function to the legally marked device, the Epoch 2000 (K971819), a class II device. The additional features incorporated in this product are designed to meet the current and expanding demands of health care professionals for more effective neurological monitoring without compromising safety or effectiveness.



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

OCT 09 2002

Axon Systems, Inc.  
Howard Bailin  
400-2200 Oser Avenue  
Hauppauge, New York 11788

Re: K022785

Trade/Device Name: Epoch XP Neurological Workstation: Epoch XP Lite  
Regulation Number: 882.1400; 882.1870; 882.1890; 882.1900  
Regulation Name: Electroencephalograph; Evoked response electrical stimulator; Evoked  
response photic stimulator; Evoked response auditory stimulator  
Regulatory Class: Class II  
Product Code: GWQ; GWF; GWE; GWJ  
Dated: September 18, 2002  
Received: September 19, 2002

Dear Mr. Bailin:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

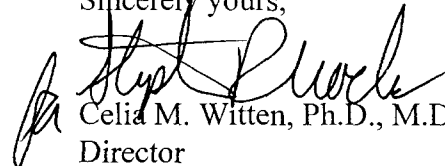
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

Page 2 – Mr. Howard Bailin

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 21 CFR Part 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4659. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/dsma/dsmamain.html>

Sincerely yours,

A handwritten signature in black ink, appearing to read "Celia M. Witten", is written over the typed name.

Celia M. Witten, Ph.D., M.D.  
Director

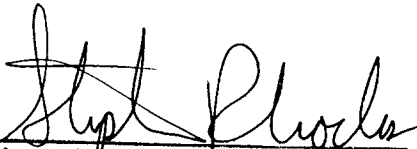
Division of General, Restorative  
and Neurological Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

**3. INTENDED USE**

Indications for Use: The Epoch XP is intended for use in the operating room and critical care areas for neurological monitoring and assessment. The instrument uses EEG, evoked potentials and EMG techniques to provide health care professionals with information to help assess a patient's neurological status during surgery or long term monitoring in the ICU.

The intended use of the modified device (Epoch XP) has not changed as a result of the modifications.

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(Division Sign-Off)  
Division of General, Restorative  
and Neurological Devices

510(k) Number K022785